

Remark

Applicants respectfully request reconsideration of this application as amended. The applicant has requested that the amendments previously made in the prior Response After Final, which were not entered at that time by the Examiner, be entered in this action. No further amendments to the claims have been entered herein. No claims have been cancelled or added. Therefore, claims 16-42 are now presented for examination.

35 U.S.C. §112 Rejection

The Examiner rejected claims 18, 19, 26 and 27 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In particular, the Examiner rejected claims 18 and 26, finding that it is unclear how the sample and hold amplifier matches the dynamic range of the photocell and the analog to digital converter. As noted in the Response After Final, claims 18 and 26 have been modified to address that the choice of the voltage or charge scale created by the sample and hold amplifier is utilized to match the appropriate dynamic ranges. In this regard, the relevant portions of the application are found in Figure 1 and the text found in the Specification beginning on page 7, line 22.

The Examiner further rejected claims 19 and 27, finding that it is unclear how the sample and hold amplifier modifies the dynamic range of the photocell based on ambient light conditions and stating that “[t]here is no input to the photocell from the S/H amplifier.” Initially, claims 19 and 27 have been corrected to be dependent on claims 18 and 26, respectively, and have been modified with respect to the scaling of voltage or charge. As indicated in the modifications to claims 18 and 26, the dynamic ranges are

matched by the choice of the scaled voltage or charge, which is produced by the sample and hold amplifier with the photocell charge and the reference voltage inputs.

The Applicant respectfully submits that, as amended, claims 18, 19, 26, and 27 distinctly claim the subject matter of the invention and are allowable under 35 U.S.C. § 112, second paragraph.

35 U.S.C. §102 Rejection,

Mechlenburg

The Examiner rejected claims 16, 17, 24 and 25 under 35 U.S.C. 102 (b) as being anticipated by U.S. Patent No. 4,724,311 of Mechlenburg (hereinafter referred to as “Mechlenburg”).

Among other differences between the relevant claims and Mechlenburg, independent claims 16 and 24 provide for a sample and hold amplifier with a first input that is a charge from an analog photocell *and a second input that is a reference voltage*. In this regard, the Examiner has cited to the sample and hold circuit 22 shown in Figure 1 of Mechlenburg. The advisory action provided in this application stated the following:

Further, Applicant’s arguments with respect to claims 16, 24, 32, and 39 are not persuasive. Applicant admits that the input to the S/H amplifier from the I/O device (28) is reasonably an enable signal. An enable signal consists of a reference voltage, for instance, either a 0V (for disable) or a +5V (for enable). Thus, the application is not in condition for allowance and this Advisory Action is proper.

The Applicant respectfully submits that the statement provided in the Advisory Action is factually incorrect, and that the claims are not anticipated by Mechlenburg. In short, (1) the signal in question in Mechlenburg is *not used as a reference voltage*, but

instead is apparently used as an enable signal; (2) the signal appears to be a digital signal and therefore *cannot be used as a reference signal*; and (3) the signal in question, regardless of its voltage level, is *not an input to the amplifier*.

(1) Regardless of what the voltage of the signal produced by the I/O device may be, *it is not used as a reference voltage*. An enable signal either enables or disables a device, essentially turning the operation of the device on or off. On the other hand, a reference voltage provides a particular voltage level that is used for some purpose in a circuit. If a signal is used as device enable signal, the signal thus is not used as a reference voltage. The purpose of the signal is not to provide a reference voltage level.

(2) A digital signal, such as the signal that may be provided to the amplifier from the I/O device in Mechlenburg, *cannot be used as a reference voltage*. The Examiner is correct that the enable signal will be either a *high* voltage, such as a nominal 5 volt signal in some environments, or a *low* voltage, such as a nominal zero volt signal. However, as is well- known, digital signals can and do vary to a considerable degree, with the amount of variance dependent on the type of logic, the number of interconnected logic gates and resulting current drain, and other circuit design factors. For this reason, a logical signal cannot be used as a reference voltage, either as a high signal or as a low signal. Therefore, it is clear that the enable signal in Mechlenburg could not be used as a reference voltage.

(3) The Advisory Action does not address the issue of the use of the signal in question *by the amplifier*. Claim 16 refers to “a second input to the sample and hold amplifier being a reference voltage”. Even if the signal from the I/O device were in some way intended to be a reference voltage, and even if a digital signal were usable as a

reference, *the signal is not an input to the amplifier*. As has been stated above, an enable signal is a signal to turn a device on or off. It is not an *input* to the device. An amplifier is a device that acts on input signals, including modification of the amplitude of the input signals. The meaning of “input” in this context is clear, and it does not include an enable signal, which in essence acts as an on/off switch to the amplifier.

Therefore, in addition to any other differences, the sample and hold circuit shown in Figure 1 Mechlenburg contains a *single input* from the plurality of photodetectors. It is respectfully submitted that no second input exists, for at least such reason, independent claims 16 and 24 are not anticipated by Mechlenburg.

Claims 17 and 25 are dependent claims that, among other reasons, are allowable because they are dependent on the allowable base claims. In addition, it is again noted that Mechlenburg does not provide for a sample and hold amplifier that *produces a scaled version of the voltage output of an analog photocell*. As indicated above, sample and hold circuit 22 does not have a reference voltage input to produce a scaled version of a voltage, nor does Mechlenburg indicate that any scaled version of a voltage is produced. Mechlenburg simply indicates that sample and hold circuit 22 individually samples the voltages produced by the photodetectors. (Mechlenburg, col. 2, lines 49-52) Therefore, claims 17 and 25 are not anticipated by Mechlenburg.

35 U.S.C. §103 Rejection,

Mechlenburg

The Examiner has rejected claims 18, 19, 26 and 27 under 35 U.S.C. 103(a) as being unpatentable over Mechlenburg. In addition to being allowable because such

claims are dependent on claims shown above to be allowable, the claims contain additional differences with the cited references.

The Examiner has found that certain elements of the rejected claims are obvious under 35 U.S.C. 103(a). However, it is respectfully submitted that the relevant elements *would not have made sense* in the context described in Mechlenburg and could *not* have been added to system shown in Mechlenburg. For this reason, such elements cannot be found to be obvious herein based on Mechlenburg. An examination of Mechlenburg demonstrates that Mechlenburg has different purposes than the claims presented herein. The differences are such that matching or modifying the dynamic range, as presented in the relevant claims, would not have made sense in Mechlenburg.

Mechlenburg describes a system for a variably transmissive filter. The system includes a plurality of detectors for incident radiation and produces a signal based on the intensity of the radiation. A microprocessor compares the signal to a reference value and produces an output to adjust the degree of transmission of radiation. (See, Mechlenburg, col. 1, lines 41-53 and col. 5, lines 28-34) In this regard, Mechlenburg describes the system shown in Figure 1. The sample and hold circuit 22 samples the output of one of the plurality of photodetectors 18-18b, with the output analyzed by microprocessor 26.

What is not present in Mechlenburg, and what does not make sense in this context, is the modification of the scale of an output to match the dynamic range of a photocell to the dynamic range of a digital to analog converter, or such modification of scale based upon the ambient light conditions. These elements are not and could not be found in Mechlenburg. Mechlenburg is describing a system for limiting the transmission of radiation. "Means are provided for adjusting the degree of transmission of the

elements in response to the intensity of the incident radiation such that the amount of incident radiation transmitted through the elements is controlled.” With this stated purpose and the described means, changing a voltage scale to match dynamic ranges of the photodetectors and the analog to digital converter is not a reasonable addition. In Mechlenburg, changing a voltage scale would change the amount of radiation allowed through the system, which is contrary to the goal of controlling the amount of radiation transmission. Mechlenburg operates by comparing a signal to a reference value to determine how much radiation is present. As Mechlenburg is determining the level of radiation to then limit the radiation allowed through the filter, changes in voltage scales and dynamic ranges makes no sense. Further, changing a voltage scale based at least in part on ambient light conditions makes no sense in the context of Mechlenburg. A change in ambient light does not modify the level of incident radiation that is being controlled by Mechlenburg, and changing the radiation transmission based on ambient light would create an illogical result.

For at least the reasons presented above, Mechlenburg does not teach or suggest the elements of claims 18, 19, 26, and 27, and it is respectfully submitted that such claims are allowable.

Mechlenburg in view of Gordon et al.

The Examiner rejected claims 20-23 and 28-42 under 35 U.S.C. 103(a) as being unpatentable over Mechlenburg in view of U.S. Patent No. 3,833,903 of Gordon, et al. (“Gordon”).

It is initially noted that claims 20-23 and 28-31 are claims dependent on claims shown above to be allowable. In addition to other reasons, such claims are allowable because such claims are dependent on the allowable base claims.

Claims 32 and 39 are independent claims that, as was discussed above in connection with claims 16 and 24, contain the element of a reference voltage as an input to a sample and hold amplifier. As stated above, the element is not present in Mechlenburg. Assuming that Gordon and Mechlenburg are properly combinable for the purposes of obviousness, Gordon does not add any teachings or suggestions that are relevant to this element. For at least this reason, it is submitted that claims 32 and 39 are allowable.

Claims 33-38 and 40-42 are claims that are dependent on claims 32 and 39. Although allowable for other reasons, such claims are allowable as being dependent on the allowable base claims.

While the foregoing demonstrates the patentability of all pending claims, it is noted that there are numerous other differences between the relevant claims and the cited references that are not explained herein, and the Applicant reserves the right to present such differences if necessary.

Conclusion

Applicants respectfully submit that the rejections have been overcome by the amendment and remark, and that the claims as amended are now in condition for allowance. Accordingly, Applicants respectfully request the rejections be withdrawn and the claims as amended be allowed.

Invitation for a Telephone Interview

The Examiner is requested to call the undersigned at (303) 740-1980 if there remains any issue with allowance of the case.

Request for an Extension of Time

Applicants respectfully petition for an extension of time to respond to the outstanding Office Action pursuant to 37 C.F.R. § 1.136(a) should one be necessary. Please charge our Deposit Account No. 02-2666 to cover the necessary fee under 37 C.F.R. § 1.17(a) for such an extension.

Charge our Deposit Account

Please charge any shortage to our Deposit Account No. 02-2666.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Date: 7/30/02



Mark C. Van Ness
Reg. No. 39,865

12400 Wilshire Boulevard
7th Floor
Los Angeles, California 90025-1030
(303) 740-1980

AMENDMENTS -- MARKED VERSION

Presented below are the amendments with markings to indicate changes made.

[No additional amendments - amendments made in prior response]